

AMENDMENTS TO THE CLAIMS

Claims pending:

- At time of the Office Action: Claims 1-25, 27-31, 34-35, and 37-43.
- After this Response: Claims 1-25, 27-31, 34-35, and 37-43.

Canceled claims: None.

Amended claims: None.

New Claims: None.

1. (Previously Amended) A computer-implemented method comprising:
receiving a plurality of events;
applying the plurality of events to a correlation function, wherein the
correlation function is implemented as a state machine and is configured to
correlate the plurality of events;
identifying an event to which an update consumer has subscribed, wherein
the update consumer is associated with the state machine;
applying the update consumer to the state machine in response to the
identified event; and
generating a specific event if the correlation function is satisfied by the
plurality of events.

2. (Previously Amended) A method as recited in claim 1 wherein the
update consumer is a class object.

1 3. (Original) A method as recited in claim 1 further including:
2 receiving a data element; and
3 applying the data element and at least one of the plurality of events to the
4 correlation function.

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6 4. (Original) A method as recited in claim 1 further including:
7 receiving a plurality of data elements; and
8 applying the plurality of data elements and the plurality of events to the
9 correlation function.

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11 5. (Original) A method as recited in claim 1 further including
12 communicating the specific event to at least one event consumer that subscribed to
13 the specific event.

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15 6. (Original) A method as recited in claim 1 further including continuing
16 to receive additional events and apply the additional events to the correlation
17 function if the correlation function is not satisfied by the plurality of events.

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19 7. (Original) A method as recited in claim 1 further including resetting the
20 correlation function after generating a specific event.
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2 8. (Original) A method as recited in claim 1 further including:
3 creating an instance of a particular state machine; and
4 defining transitions for the particular state machine by subscribing to at
5 least one event.

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7 9. (Previously Amended) A method as recited in claim 8 further including
8 deleting the instance of the particular state machine if the instance of the particular
9 state machine reaches a final state.

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11 10. (Original) One or more computer-readable memories containing a
12 computer program that is executable by a processor to perform the method recited
13 in claim 1.

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15 11. (Previously Amended) A computer-implemented method comprising:
16 receiving a plurality of events;
17 receiving a plurality of data elements;
18 identifying a plurality of correlation functions configured to correlate the
19 plurality of events and the plurality of data elements, wherein each correlation
20 function is implemented with an associated state machine, and wherein each state
21 machine has an associated update consumer that updates the state of the associated
22 state machine;
23 applying the plurality of events and the plurality of data elements to the
24 plurality of correlation functions; and
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1 generating a specific event if at least one of the plurality of correlation
2 functions is satisfied.

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4 12. (Previously Amended) A method as recited in claim 11 further
5 comprising deleting a particular state machine when the particular state machine
6 reaches a final state.

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8 13. (Previously Amended) A method as recited in claim 11 wherein each
9 update consumer is a class object.

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11 14. (Original) A method as recited in claim 11 further including
12 communicating the specific event to at least one event consumer that subscribed to
13 receive the specific event.

14
15 15. (Original) A method as recited in claim 11 further including:
16 receiving additional events;
17 receiving additional data elements; and
18 applying the plurality of events, the additional events, the plurality of data
19 elements and the additional data elements to the plurality of correlation functions.

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21 16. (Previously Amended) A method as recited in claim 11 further
22 including:
23 receiving additional events;
24 receiving additional data elements;
25 receiving additional correlation functions; and

1 applying the plurality of events, the additional events, the plurality of data
2 elements and the additional data elements to the plurality of correlation functions
3 and the additional correlation functions.
4

5 17. (Original) A method as recited in claim 16 further including
6 generating the specific event if at least one of the plurality of correlation functions
7 or at least one of the additional correlation functions is satisfied.
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9 18. (Original) A method as recited in claim 11 wherein the specific event
10 generated is dependent on which correlation function is satisfied.
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12 19. (Original) One or more computer-readable memories containing a
13 computer program that is executable by a processor to perform the method recited
14 in claim 11.
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16 20. (Previously Amended) A computer-implemented method comprising:
17 identifying a schema for creating state machines, the state machines to
18 correlate at least two events;

19 creating an instance of a particular state machine;
20 defining transitions for the particular state machine by subscribing to at
21 least one event; and

22 applying an update consumer to the particular state machine to update the
23 state of the particular state machine, wherein the update consumer is a class object.
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1 21. (Original) A method as recited in claim 20 further including deleting
2 the particular state machine if the particular state machine reaches a final state.

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4 22. (Original) A method as recited in claim 20 wherein the particular state
5 machine includes a timer, the method further including deleting the particular state
6 machine if the timer expires.

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8 23. (Original) A method as recited in claim 20 wherein the particular state
9 machine correlates at least one event and at least one data element.

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11 24. (Original) A method as recited in claim 20 wherein the particular state
12 machine correlates a plurality of events and a plurality of data elements.

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14 25. (Original) A method as recited in claim 20 further including
15 determining a current state of the particular state machine.

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17 26. (Canceled).

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19 27. (Original) One or more computer-readable memories containing a
20 computer program that is executable by a processor to perform the method recited
21 in claim 20.

1 28. (Previously Amended) An apparatus comprising:
2 a plurality of event consumers; and
3 an event correlator coupled to the plurality of event consumers, the event
4 correlator to receive events from at least one event source and to receive data
5 elements from at least one data source, the event correlator further to receive at
6 least one correlation function configured to correlate events and data elements and
7 to apply the received events and the received data elements to the correlation
8 function, wherein the correlation function is implemented by a state machine
9 having an associated update consumer that updates the state of the state machine,
10 and wherein the event correlator generates a specific event if the received events
11 and the received data satisfy the correlation function.

12
13 29. (Original) An apparatus as recited in claim 28 wherein the event
14 correlator communicates the specific event to the plurality of event consumers.

15
16 30. (Original) An apparatus as recited in claim 28 wherein the event
17 correlator communicates the specific event to event consumers that have requested
18 to receive the specific event.

19
20 31. (Original) An apparatus as recited in claim 28 wherein the event
21 correlator communicates the specific event to a plurality of filters, wherein each of
22 the plurality of filters is associated with one of the plurality of event consumers.

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24 32-33. (Canceled).
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1 34. (Original) An apparatus as recited in claim 28 wherein the event
2 correlator continues to receive additional events and additional data elements and
3 apply the additional events and the additional data elements to the correlation
4 function.

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6 35. (Previously Amended) One or more computer-readable media having
7 stored thereon a computer program that, when executed by one or more
8 processors, causes the one or more processors to:

9 receive a plurality of events;
10 identify a plurality of correlation functions configured to correlate the
11 plurality of events, wherein each of the plurality of correlation functions is
12 implemented as a state machine having an associated update consumer;

13 apply the plurality of events to the plurality of correlation functions to
14 determine whether any of the plurality of correlation functions are satisfied by the
15 plurality of events, wherein the plurality of events are applied by causing update
16 consumers associated with each event to update the state of the associated state
17 machine; and

18 generate a specific event if one of the plurality of correlation functions is
19 satisfied by the plurality of events.

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21 36. (Canceled).

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23 37. (Previously Amended) One or more computer-readable media as
24 recited in claim 35 wherein each state machine is a class object.

1 38. (Original) One or more computer-readable media as recited in claim
2 37 further causing the one or more processors to identify a current state of the state
3 machine.

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5 39. (Original) One or more computer-readable media as recited in claim
6 35 further causing the one or more processors to:

7 create a new instance of a state machine to implement a particular
8 correlation function; and

9 define transitions for the new instance of the state machine by subscribing
10 to at least one event.

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12 40. (Previously Amended) A computer-implemented method comprising:
13 receiving events from event providers;
14 creating a first state machine;
15 creating a second state machine;
16 associating a first event type with the first state machine, wherein the first
17 state machine has an associated first update consumer to update the state of the
18 first state machine;

19 associating a second event type with the second state machine, wherein the
20 second state machine has an associated second update consumer to update the state
21 of the second state machine;

22 in response to receiving an event having a first event type, applying the first
23 update consumer to the first state machine;

24 in response to receiving an event having a second event type, applying the
25 second update consumer to the second state machine; and

1 if the events are correlated:
2 generating an additional event; and
3 sending the additional event to an event consumer.
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5 41. (Previously Amended) The method as recited in claim 40, further
6 comprising deleting the first state machine if the first state machine reaches a final
7 state.
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9 42. (Previously Presented) The method as recited in claim 40, wherein the
10 additional event is sent to the event consumer through a filter associated with the
11 event consumer.
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13 43. (Previously Presented) The method as recited in claim 40, wherein the
14 event consumer includes at least one of an event logging consumer, an event
15 forwarding consumer, a mail consumer, and a scripting consumer.
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